STATUS OF THE CLAIMS

The status of the claims of the present application stands as follows:

1. to 11. **(Cancelled)**

12. **(Currently amended)** A method of dividing a power source voltage comprising the steps of:

providing a voltage divider circuit having a first transistor including a first transistor gate electrode having a first transistor gate electrode area and a second transistor including a second transistor gate electrode having a second transistor gate electrode area;

applying the power source voltage to said voltage divider circuit; and

dividing the power source voltage according to the ratio of said first transistor gate electrode area to said second transistor gate electrode area, wherein said ratio is calculated using a closed form non-linear function solved by numerical iteration.

13. **(Currently amended)** A method according to claim 12, wherein said function is

$$[6.1434 \times \mathrm{Log}(V2)] + [2.6286 \times \{\mathrm{Log}(V2)\}^2] + [1.3483 \times \{\mathrm{Log}(V2)\}^3] + [0.37073 \times \{\mathrm{Log}(V2)\}^4] + [0.036284 \times \{\mathrm{Log}(V2)\}^5] + \{\mathrm{Log}\, R\} - [6.1434 \times \mathrm{Log}(V1)] - [2.6286 \times \{\mathrm{Log}(V1)\}^2] - [1.3483 \times \{\mathrm{Log}(V1)\}^3] - [0.37073 \times \{\mathrm{Log}(V1)\}^4] - [0.036284 \times \{\mathrm{Log}(V1)\}^5] = 0,$$

where

$V1$ = desired voltage across said first transistor = $VDD \times VR/(VR + 1)$
$V2$ = desired voltage across said second transistor = $VDD/(VR + 1)$
$VR = V1/V2$
VDD = applied power source voltage
R = said ratio of said second transistor gate electrode area to said first transistor gate electrode area~~first transistor further comprises a drain and a source, each connected to said second transistor gate electrode~~.

14. to 19. **(Cancelled)**

20. **(Currently amended)** A method of designing a circuit for dividing voltage, comprising the steps of:

providing a first transistor including a gate electrode having an area, a source, and a drain; and

providing a second transistor including a gate electrode having an area, a source, and a drain;

selecting said first transistor gate electrode area and said second transistor gate electrode area according to a predetermined ratio between the areas to provide a desired voltage division, wherein said ratio is calculated using a closed form non-linear function solved by numerical iteration; and

joining said second transistor gate electrode with said first transistor source and said first transistor drain.

21. **(New)** A method according to claim 20, wherein said function is

[6.1434 x Log(V2)] + [2.6286 x $\{Log(V2)\}^2$] + [1.3483 x $\{Log(V2)\}^3$] + [0.37073 x $\{Log(V2)\}^4$] + [0.036284 x $\{Log(V2)\}^5$] + {Log R} - [6.1434 x Log(V1)] - [2.6286 x $\{Log(V1)\}^2$] - [1.3483 x $\{Log(V1)\}^3$] - [0.37073 x $\{Log(V1)\}^4$] - [0.036284 x $\{Log(V1)\}^5$] = 0, where

V1 = desired voltage across said first transistor = VDD x VR/(VR + 1)
V2 = desired voltage across said second transistor = VDD/(VR + 1)
VR = V1/V2
VDD = applied power source voltage
R = said ratio of said second transistor gate electrode area to said first transistor gate electrode area.

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